REMARKS

Claims 1-21 were pending in the present application. In light of the foregoing amendments and the following remarks, Applicant respectfully requests reconsideration.

The Examiner has objected to the drawings under 37 C.F.R. 1.83(a) because they fail to show the inrush current controller details as described in the specification. The Applicant has reviewed both the drawings and the specification and cannot determine what specifically, the Examiner is objecting to. Applicant respectfully requests that the Examiner provide additional details as to the nature of the objection. Specifically, which details the Examiner feels are not in the drawings that are described in the specification.

Claims 1-4, 7-11, 13-16, 19-21 stand rejected under 35 U.S.C. §102(b) as being anticipated by Klein et al. (U.S. Patent Number 6,138,194) (hereinafter 'Klein'). Applicant respectfully traverses this rejection.

Claims 5, 6, 12, 17, and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Klein in view of Appeton (International Patent Application Number WO0182034 A2). Applicant respectfully traverses this rejection.

Applicant's claim 1 recites

> "A system, comprising:
> means for detecting a device being **inserted** into the system;
> means for blocking delivery of an electrical signal to the inserted device for a first preselected duration of time in response to detecting the device being inserted."

The Examiner asserts that Klein teaches in FIG. 2 and at col. 4, lines 26-40 and FIG. 6, 608) each and every element recited in Applicant's claim 1. The Applicant respectfully disagrees with the Examiner's assertion and characterization of Klein.

Specifically, at col. 1, lines 61-63 Klein discloses

> "Removal of the bus card while the computer system is operating can have serious consequences. At a minimum, the system is likely to "hang" while waiting on an uncompleted bus transaction involving the removed bus card. At worst, removal of the bus card from an operating computer system can cause damage to the computer system and/or the bus card. What is needed is a mechanism that **removes power and signals** from a bus card before the bus card can be inadvertently **removed** from a computer system."

Klein also discloses at col. 1, line 66 through col. 2 line 57

> "One embodiment of the present invention provides an apparatus for removing power from a bus card in a computer system when the bus card is inadvertently removed from the computer system while the computer system is operating. ... The present invention can thereby prevent damage or failure of the computer system when a bus card is inadvertently removed from the computer system by powering down the bus card and/or removing signals from the bus card before it is completely removed. ...
>
> In another embodiment of the present invention, the controller is configured to detect an insertion of the bus card into the bus connector by monitoring the movement sensor, and to **reset** the bus card upon detection of the insertion. In a variation on this embodiment, the controller is configured to reset the bus card to an initial state. In another variation, the controller is configured to save state from the bus card to the computer system before removing power from the bus card, and to reset the bus card by restoring the state from the computer system to the bus card.
>
> In another embodiment of the present invention, the controller is configured to wait until a bus transaction involving the bus card completes before removing power from the bus card. In another embodiment, the controller is configured to wait until the computer system completes a task involving the bus card before removing power.
>
> One embodiment of the present invention includes an inrush limiter, coupled between the power conductor and the bus connector, to limit rapid inflows of current from the power conductor into a bus card in the bus connector. Another embodiment includes isolation buffers coupled between signal lines in the bus connector and the computer system for isolating the computer system from the bus card, **when power is removed** from the bus card."

In addition, at col. 4, lines 26-40, Klein discloses

> "In this embodiment, a number of signal lines from bus 106 feed into controller 200. These include GNT signal 214 and CLK signal 212, which are bus grant and clock signals specified under the PCI bus standard. Controller 200 additionally receives card detect signal 216 from optical card detector 210 within physical slot 204. Card detect signal 216 is asserted when a bus card is inserted into physical slot 204 causing optical card detector 210 to detect the presence of the card. In this embodiment, optical card detector includes a light emitting diode (LED) which shines onto an optical detector when no bus card is present in physical slot 204. Light from the LED is blocked from the optical sensor when a bus card is inserted into physical slot 204 so that the bus card is interposed between the LED and the optical sensor. Other embodiments use mechanical switches to detect the presence or absence of a bus card from physical slot 204."

Further Klein discloses at col. 6, lines 41-48

> "In state 604, the system waits until a bus transaction completes so that the bus card is not disabled while a bus transaction involving the bus card is in progress. Details of this waiting are described above with reference to the state diagram in FIG. 3. The system next advances to state 606. In state 606, the system removes power from the bus card. The system next advances to state 608. In state 608, the system senses insertion of a new bus card. The system next proceeds to state 610. In state 610, the new bus card is reset. The system next advances to state 612, which is an end state."

From the foregoing, it is clear that Klein **does not teach or disclose** "blocking delivery of an electrical signal to the inserted device for a first preselected duration of time in response to detecting the device being inserted" as recited in Applicant's claim 1. To the contrary, in multiple places, Klein describes various embodiments for removing power when detecting removal of a device. Further, the delay described in Klein is a delay before removing power, not a delay before providing power. Klein only briefly mentions insertion detection and then only in the context of resetting of the device.

Accordingly, Applicant submits that claim 1, along with its dependent claims, patentably distinguishes over Klein for the reasons given above.

Claim 7 recites a method comprising, in pertinent part, "blocking delivery of an electrical signal to the inserted device for a first preselected duration of time in response to detecting the device being inserted."

Klein **does not teach or disclose** this feature. Thus, Applicant submits that clam 7, along with its dependent claims, patentably distinguishes over Klein for the reasons given above.

Claim 13 recites a system comprising, in pertinent part, "a controller adapted to block delivery of an electrical signal to the inserted device for a first preselected duration of time in response to detecting the device being inserted."

Klein **does not teach or disclose** this feature. Thus, Applicant submits that claim 13, along with its dependent claims, patentably distinguishes over Klein for the reasons given above.

Claim 19 recites an apparatus comprising, in pertinent part, "a sensing circuit adapted to detect a device being electrically coupled to the printed circuit board and provide a first signal indicative thereof;" and "a controller associated with the printed circuit board, the controller being adapted to receive the first signal and block delivery of electrical power to the device for a first preselected duration of time in response to receiving the first signal that is indicative of the device being electrically coupled to the printed circuit board."

Claim 20 recites features similar to the features recited in claim 19. Klein **does not teach or disclose** these features. Thus, Applicant submits that claims 19 and 20 patentably distinguish over Klein for the reasons given above.

Claim 21 recites an apparatus comprising, in pertinent part, "a sensing circuit adapted to detect the device being coupled to the connector and provide a first signal indicative thereof;" and "a controller associated with the printed circuit board, the

controller being adapted to deliver electrical power to the connector a preselected duration of time after receiving the signal from the sensing circuit."

Klein **does not teach or disclose** these features. Thus, Applicant submits that claim 21 patentably distinguishes over Klein for the reasons given above.

Appeton is directed to providing portions of a circuit board with power at different intervals using a power up sequence to allow a PC card to power up without using more current than is allowed. Specifically, Appeton discloses at page 2, lines 1-20

> "According to a first aspect of the present invention, there is provided a power-up circuit for a PC card having a plurality of sub-circuits, comprising means for controlling the amount of current initially taken by at least one of the sub-circuits, such that the total current taken by the plurality of sub-circuits does not exceed a predetermined threshold value at a given instant in time.
> Preferably, the current-controlling means is such as to control the sequence in which the plurality of sub-circuits initially take current from a source. In this way, by effectively powering-up each individual sub-circuit separately and in a particular sequence, the total amount of current drawn at a particular instant in time can be kept well within the level specified by the PCMCIA standard.
> In a preferred embodiment, the current-controlling means is arranged such that the sub-circuit drawing the least d. c. current is turned on first, with the sub-circuit drawing the most d. c. current being turned on last. The current-controlling means may be provided in the form of delay elements, or may be provided as a software-controlled microprocessor. The current-controlling means may further include means arranged to control the rate at which one or more of the sub-circuits initially takes current from the source."

Appeton also discloses at page 4, lines 13-24

> "At the time when power is input to the PC card circuit 1, i. e. at the start of the power-up phase, the radio circuit 3 takes very little d. c. current from the source. Whilst the reservoir capacitor 5 will take no d. c. current in the steady state condition, it will, however, take considerable current when initially charging in the power-up phase. In order to reduce this effect, a high impedance path is provided by the resistor 13. The RC arrangement of the capacitor 5 and the resistor 13 allows the capacitor to charge at a controlled rate. The resistor 13 is bridged by the FET switch 15 which acts as a bypass switch in the operational phase, as will be explained below.

> At the start of the power-up phase, no current is drawn by the processor sub-circuit 7 because of the delay circuit 11. The delay circuit is required in order for the PC card circuit 1 to meet the PCMCIA specification, as will be explained in detail below."

From the foregoing, it is clear that Appeton does not teach or suggest "blocking delivery of an electrical signal to the inserted device for a first preselected duration of time in response to detecting the device being inserted" as recited in Applicant's claim 1. To the contrary, Appeton appears to teach that even upon start-up some power is being applied to the PC card. In light of the problem Appeton is solving (the need to sequence power on to reduce total current during start-up), Appeton's solution makes sense.

However, this is in contrast to the Applicant's recited claims. For example, regarding Applicant's claim 5, which recites

> "blocking a first electrical signal from being delivered to a first portion of the inserted device for a first preselected duration of time, and for blocking a second electrical signal from being delivered to a second portion of the inserted device for a second preselected duration of time, wherein the first preselected duration of time is greater than the second preselected duration of time."

From the above discussion, Appeton allows at least a portion of the power to be provided to a first circuit the entire time that the PC card is going through the power up phase and only delays power to the second portion of the circuit. Thus, there is no first and second preselected duration of time taught or suggested in Appeton and therefore no mention of wherein the first preselected duration of time is greater than the second preselected duration of time, as suggested by the Examiner.

Neither Klein nor Appeton, taken singly or in combination, teach or suggest the combination of features recited in Applicant's claim 1. Accordingly, Applicant submits

that claim 1, along with its dependent claims, patentably distinguishes over Klein in view of Appeton for the reasons given above.

Neither Klein nor Appeton, taken singly or in combination, teach or suggest the combination of features recited in Applicant's claim 7. Accordingly, Applicant submits that claim 7, along with its dependent claims, patentably distinguishes over Klein in view of Appeton for the reasons given above.

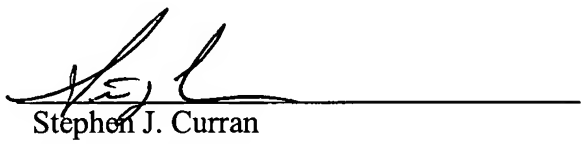
Neither Klein nor Appeton, taken singly or in combination, teach or suggest the combination of features recited in Applicant's claim 13. Accordingly, Applicant submits that claim 1, along with its dependent claims, patentably distinguishes over Klein in view of Appeton for the reasons given above.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681-43500/BNK.

Respectfully submitted,



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